



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,763	03/22/2004	Tim Forrester	UP1 00116	2438
32968	7590	10/04/2005	EXAMINER	
KYOCERA WIRELESS CORP. P.O. BOX 928289 SAN DIEGO, CA 92192-8289			NGUYEN, KHAI M	
			ART UNIT	PAPER NUMBER
			2819	
DATE MAILED: 10/04/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/806,763

Applicant(s)

FORRESTER ET AL.

Examiner

Khai M. Nguyen

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/22/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

2. The application has not been checked to the extent necessary to determine the presence of all possible typographical and grammatical errors. However, Applicant's cooperation is requested in correcting any errors of which he/she may become aware in the application.

### ***Drawings***

3. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- a. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cygan et al. (US 5,564,086) in view of Medendorp et al. (US 4,122,400). Cygan et al. discloses a mismatched detector, comprising: an antenna (106); a directional device (directional coupler 112, circulators/isolators also mentioned at column 1, lines 45-49)

Art Unit: 2819

for transmitting signals to and receiving signals from the antenna, wherein the directional device (112) includes detectors (the sampler – abstract) adapted for measuring (Cygan et al. uses the term “sample”) transmitted and reflected power (116/118); and a processor device (110) generates feedback signals (120 – column 4, line 41) to modify (or control) a matching network (111) based on the measured transmitted and reflected power (column 2, lines 63-68).

Cygan et al. lacks to show detail structure of said means (see column 4, lines 3-5) of the directional device (112), and the feedback signal(s) (120) is coupled to the power amplifier (104) for modifying its operating characteristics.

Medendorp et al. discloses an analogous art (Fig. 1) that includes the use of a directional device (21), wherein the output of the directional device is coupled to a slow wave structure and multiple power detectors (diodes 43/47 – Fig. 1), and a processor device (the feedback loop) adapted for generating a feedback signal ( $V_{gc}$ ) based on the sensed/measured transmitting and reflected power generated by the directional device (21) (column 2, lines 17-40) for controlling an amplifier (13). Therefore, it would have been obvious to one person having ordinary skills in the art at the time the invention was made to modify the processor device (110 - as taught by Cygan et al.) in the feedback loop of Fig. 1 for controlling both the matching network (111) and power amplifier (104) based on the measured (or sensed/sampled) the transmitted and reflected power as suggested by Medendorp et al. (abstract) in order to protect the amplifier (104) by adjusting the amplifier's operating characteristic accordingly.

Art Unit: 2819

b. Claims 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sroka et al. (US 5,778,308) in view of Medendorp et al. (US 4,122,400).

Regarding claims 8-13, Sroka et al. discloses a wireless device, (see Figs. 1-4), comprising:

- a matching circuit (31);

- a match detector (the feedback loop of Fig. 3A) coupled with the matching circuit (31), wherein the match detector includes:

- a directional device (33) adapted to transmit signals to an antenna (17) and receive reflected signals from the antenna (17), wherein the antenna (17) is coupled to the matching circuit (31), and

- first and second detectors (34/36 – Fig. 3B) coupled to the directional device (33) for measuring power of the reflected/transmitted signals (returned/forwarded signals – Fig. 3A);

- a processor (32) configured to read (or receive) the measured transmitted (forward path) and reflected power (return path) and to generate controls (column 4, lines 44-46) adapted for controlling the matching circuit (31) (column 4, lines 26-29);

- a transceiver (transmitter/receiver of Fig.2) comprising an amplifier (24) electrically coupled to the antenna (17) through the matching circuit (31);

- a control block (digital/analog processor 32/132 – Fig. 3C) coupled to the transceiver and adapted to control the transceiver;

- a memory (every digital processor contains at least one storage/ latch/ register/ memory element) storing data for the control block;

Art Unit: 2819

an input device (key pads of the cell phone unit 15 – Fig. 1, column 2, lines 53-54) coupled to the control block and configured to receive input from a user (or person who uses the phone unit 15 of Fig. 1); and

a power source (or supply – battery of the cell phone unit 15 shown in Fig. 1) coupled to the control block and configured to receive input from the control block.

Sroka et al. also teaches his wireless device is a mobile communication wireless system (Fig. 1) that includes at least one base station (16), and a cell phone unit (15).

Sroka et al. only lacks to show the feedback signal(s) is/are coupled to the amplifier (24 of Fig. 2) for modifying its operating characteristics.

Medendorp et al. discloses an analogous art (Fig. 1) that includes a processor means (the feedback loop) adapted for generating a feedback signal ( $V_{gc}$ ) based on the sensed/measured transmitting and reflected power generated by the directional device (21) (column 2, lines 17-40) for controlling an amplifier (13).

Therefore, it would have been obvious to one person having ordinary skills in the art at the time the invention was made to modify the processor (32) of the wireless system (as taught by Sroka et al.) for controlling both the matching network (31) and amplifier (24 or 22 of Fig. 2) based on the measured (or sensed/sampled) transmitted and reflected power as suggested by Medendorp et al. (see the abstract) in order to protect the amplifier (24) by adjusting the amplifier's operating characteristic accordingly.

Regarding claims 14-16, Sroka et al. discloses a communication device (Fig. 1), comprising:

a mismatch detector (Fig. 3A), wherein the mismatch detector includes: a directional device (33) adapted to transmit signals to an antenna (17) and receive reflected signals from the antenna (17), and detectors (34/36) coupled to the directional device (33) configured to measure/sense/sample the power of the transmitted/reflected signals;

amplifier(s) (22/24 – Fig. 2) amplifying transmit/receive signal; and

a processor (32) configured to read (or receive) the measured transmitted (forward path) and reflected power (return path) and to generate controls (column 4, lines 44-46) adapted for controlling the matching circuit (31) (column 4, lines 26-29);

Sroka et al. only lacks to show the feedback signal(s) is/are coupled to one of the amplifiers (24 of Fig. 2) for modifying its operating characteristics.

Medendorp et al. discloses an analogous art (Fig. 1) that includes a processor means (the feedback loop) adapted for generating a feedback signal ( $V_{gc}$ ) based on the sensed/measured transmitting and reflected power generated by the directional device (21) (column 2, lines 17-40) for controlling an amplifier (13).

Therefore, it would have been obvious to one person having ordinary skills in the art at the time the invention was made to modify the processor (32) of the communication device (as taught by Sroka et al.) for controlling both the matching

Art Unit: 2819

network (31) and amplifier (24 or 22 of Fig. 2) based on the measured transmitted and reflected power as suggested by Medendorp et al. (see the abstract) in order to protect the amplifier (24) by adjusting the amplifier's operating characteristic accordingly.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571-272-1809. The examiner can normally be reached on 9:00 - 5:30 Monday-Friday.



Art Unit: 2819

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert (Bob) J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai M. Nguyen  
Art Unit: 2819  
571-272-1809

  
PEGUY JEANPIERRE  
PRIMARY EXAMINER